

## Claims

1. The invention relates to an integrated circuit with a single sensor element (1) for converting a physical variable into an electrical signal, comprising a comparator unit (4) by which means the electrical signal of the sensor element (1) can be compared with various different threshold values in order to produce different discreet circuit states and an output unit (5) for outputting an output signal representing the different discreet circuit states of the comparator unit (4), characterized in that the threshold values of the comparator unit (4) are stored in a storage unit of the integrated circuit in such a way that they can be regulated with a control device (3), and that the integrated circuit has a single output terminal (7a) from which the various circuit states of the electrical signal can be picked off in code.
2. The integrated circuit arrangement of Claim 1, characterized in that it has a transducer (1) to convert the analog physical variable into an analog electrical input signal, which is connected to the input (6).
3. The integrated circuit arrangement of Claim 1 or 2, characterized in that the output terminal (7a) also serves as the input terminal for the control device (3).

4. The integrated circuit arrangement of one of the Claims 1 to 3, characterized in that the adjustable threshold can be adjusted by the user of the sensor circuit.

5. The integrated circuit arrangement of one of the preceding claims, characterized in that the thresholds are assembled into threshold pairs, each of which is associated with a switching state.

6. The integrated circuit arrangement of Claim 5, characterized in that the analytical unit (4) is controlled by the control unit (3) in such a way that a hysteresis exists between the individual threshold pairs.

7. The integrated circuit arrangement of one of the preceding claims, characterized in that the analytical unit (4) is designed so that short-term changes of the input signal do not result in a change of the switching signal.

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